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an
Inaugural Dissertation
on
acute Peritonitis

Respectfully submitted
To the

Medical Faculty
of

The University of Pennsylvania
By

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On Peritonitis

When we contemplate at what length the diseases of the bowels have been treated by most physicians of every age & country, we cannot but be surprised that Peritonitis a disease which in many respects is so closely allied to many of those affections, particularly Cholic & Enterites, should have attracted so little attention & is comparatively so little understood. It being however, a disease, insidious in its nature & replete with danger, & having been marked by some peculiarity, of treatment, different from the two already mentioned, I have thought proper to bestow on it a more particular consideration, though not so much with a view of saying any thing new on the subject, as with a hope of exciting the attention of those to it, who are better able to give to it a more just & satisfactory investigation.

The symptoms which characterize Acute Peritonitis, are rigors & shivering with pain in the abdomen, varying very much in its seat, its degree of violence & general character. Sometimes the

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pain is confined to a particular part, but most commonly, it is diffused over the abdomen. It is very much increased by pressure, & in some cases, it is very little complained of, except, when pressure is made, having the feel rather of tenderness than acute pain. Quickly succeeding to these symptoms are more or less of fever. The pulse, is remarkably small, quick & corded, & unless strictly attended to may deceive the practitioner as to the nature of the complaint. The patient now complains of thirst heat & dryness of the tongue & fauces, though dryness of these parts do not uniformly take place for frequently they are perfectly moist. These then are the more ordinary symptoms which usher in an attack of Peritonitis, but most commonly in 12 or 24 hours & frequently in a much shorter period, the pain & tenderness of the abdomen become so much increased, that the weight of the bed clothes are rendered

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almost insupportable. Examined at this time, we should find the patient on his back, writhing under most excruciating pain, with his knees drawn up, the tension & swelling of his abdomen considerably augmented, his pulse small & contracted to the feel, & his tongue covered with a tough cream coloured mucus. The drawing up of the knees, is a very prominent symptom in this disease, for scarcely is there a case, where the patient does not recur to this posture, to relieve himself of pain. This it does by relaxing the abdominal muscles, & throwing the weight of the intestines on the back. The state of the bowels varies greatly in Peritonitis, sometimes they are loose, but most commonly in a natural condition being very readily moved by very mild medicines. Evacuations from the bowels produce however little relief, but seem rather to aggravate his sufferings during the time of operation & after it is over.

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As however the disease advances, all the symptoms increase, particularly the pains + tumefaction of the abdomen. It now frequently happens at this conjuncture, that the pain which before was excruciating + excessive, suddenly ceases as if relieved by some one of our remedies. We should however not construe this into an auspicious omen as it is most commonly considered by those who have had much experience in the disease, to be the precursor of death. With this sudden subsidence of pain, there likewise takes place a corresponding subsidence in the force of the pulse, which is greatly increased in rapidity as much so indeed, that it can scarcely be counted, dark matter is now vomited or expelled from the stomach with sighs & a paroxysmic effort. Cold clammy sweats now break out, the extremities become cold + clammy, the countenance collapsed + haggard + finally difficult + laborious respiration closes the tragic scene. Inflammation of

the Peritoneum may occur in a more limited form than the one I have mentioned, & according to the seat of it, various neighboring organs are affected, which give rise to a great diversity of symptoms. When it is in the lower part of the abdomen, it is generally accompanied, by frequent painful desire to pass urine, & an acute pain extending along the urethra, leading to the suspicion of retention, of urine the catheter, being employed in such cases the bladder is found empty. When the inflammation is seated in that part of the Peritoneum, contiguous to the Stomach or upper part of the abdominal canal, there is great nausea & vomiting, & sometimes a peculiar convulsive eructation or belching of wind. Hiccup & quick short breathing appear which is probably connected with an affection of the diaphragm. Such are the general characters of Peritonitis, it differs however from Cholic & Enteritis in this, that the bowels are natural or loose, the pulse small & corded & above 100 in a minute, by

the pain, in Peritonitis being more permanent, by its being increased by pressure, even before tension has taken place, in the abdomen, by its producing no inclination to go to stool, & by its not being diminished if this evacuation be produced spontaneously or by design. What however is most remarkable in Peritoneal inflammation is, that portion of it which lines the parieties of the abdomen, never extends its inflammation to the muscles anteriorly. The fact is exactly the reverse as it regards the viscera contained in the abdominal cavety. Peritoneal inflammation may extend to the mucous tissue of the intestines & terminate in confirmed Enteritis. It is yet a question among practitioners, whether inflammation may be seated in that portion of the Peritoneum, lining the parieties of the abdomen, without affecting the intestinal canal? As it regards the prognosis of Peritonitis, we should be encouraged only by a change when it is attended with a

gradual diminution of all the symptoms, but more particularly that of the patients extending his lower extremities, of his own accord, this is always favourable unless mortification has taken place. On a post mortem examination the Peritoneum will be found minutely injected with red blood, & exhibiting all the marks of the highest grade of inflammation with effusions of coagulable lymph, & in some cases extensive effusion & ulceration, but very rarely Gangrene or Mortification to be found.

It would appear from the history of Peritonitis which I have given, that there would be little doubt as to the correct mode of treatment to be pursued, this I find however not to be the case. In no disease perhaps has there been more disputation or difference of opinion concerning the proper mode of treatment to be pursued than the one now under consideration. Whilst some allege that the liberal

use of Opium is the proper mode to be pursued, there are others that utterly deny its utility, & urge the depleting measures to the fullest extent. Nor is this difference of opinion confined to the more illiterate of our profession. Many of the more enlightened practitioners of Europe, particularly Sir George Fordice & his disciples, maintain that Opium is the proper remedy & the one worthy to be relied on. Although the Pathology of Peritonitis seems not to be well understood, yet there can be certainly very little doubt, as to the correct mode of treatment to be pursued. When called to a case of Peritonitis, we should consider that we have under our care, a species of inflammation very rapid in its course & if not timely arrested inevitably proves fatal. Since then to subdue inflammation seems to be our first object, we must combat it in the most active manner, by the most appropriate remedies for this purpose. These are few & simple, the most important

of which, is bloodletting, pushed as far as possible consistant with the strength of the patient & the urgency of the symptoms, regardless entirely of of the pulse. The pulse in this disease, is never active or strong, but feeble cordice & depressed in proportion to the violence of the attack, so that it rises as we continue to extract blood. In no case of inflammation, is bloodletting of much avail, unless it be used at an early period of the disease, & pushed to such an extent, as to produce a decided impression on the system, which is indicated by weakness of pulse, pailness & some degree of faintness. The pain however should be the chief criterion, by which the practitioner should be regulated in bleeding; never to stop the flow of blood until the pain, is removed or very much diminished. Simple depletion by the lancet will not always succeed in relieving the pain or in eradicating or curing the disease, though it keeps it under, & mitigates greatly its violence.

finding that the lancet cannot eradicate the disease, we should as an auxiliary have recourse to topical depletion, by cups or leeches taking away as much blood by these means as possible. As it respects the other topical applications, such as blisters, there seems not to be less disputation or difference of opinion, than with regard to bleeding. Determining however from the experience of Dr Chapman which has not been limited in this disease, & to which I always adhere with the greatest difference, I am lead to believe with him, that they are among the most important of the topical applications provided they be properly timed. They should uniformly be preceded, by warm fomentations to the abdomen, & by liberal direct depletion. The best mode by which fomentations can be effected, is by bread & milk poultices, laid on over the whole abdomen, or by musk placed in a bag moderately full so that it may adapt itself more accurately to the contour of the belly. The next step

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to be pursued, is to excite copious perspiration, this often has the happiest effect in Peritoneal inflammation. Diaphoretics seem to exert their beneficial influence, by drawing off the blood from the capillaries of the Peritoneum and determining it to the surface of the body by giving to it a centrifugal direction. To induce perspiration we should confide mostly in external means, & above all in the vapour bath. The operation of the bath should be aided by the use of diaphoretics internally into which opium enters largely, the best of which seems to be the Dovers Powders. To show the great utility of the bath, a case is related by Dr Chapman in his lectures, in which two of the most eminent practitioners of Phila. were engaged, they had taken from 140 to 150 ℥ of blood in a short period, without apparently having derived any or much benefit. It was now proposed by some one of them, to excite perspiration, & the vapour bath was employed.

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Scarcely had the remedy begun to act, when the pulse became soft & all the symptoms very much mitigated; from the termination of this case the Dr. has been lead to the diaphoretic plan early in the disease, but never until V. Section has been copiously used. It has ever been remarked as a distinguishing symptom in this disease, that however great the pain may be, there is no desire to go to stool & that evacuations from the bowels produce no relief to the patient. Unavailing however as cathartics may be in this disease yet they should not be entirely overlooked. Why evacuations from the bowels by purgatives, are considered less serviceable in Peritoneal inflammation than in any of the Phlegmasia I cannot pretend to say. That they are among the most important remedies in Puerperal Fever, no one I presume will pretend to deny & that this is a disease dependent in a great measure on Peritoneal inflamation there can be at present but very little doubt. The bowels however in Peritonitis should

always be kept in a soluble condition, either by mild laxatives, or by enemites which perhapse is preferable. In making use of the Enemites they should be composed of the mildest ingredients & exhibited in the largest quantities so as to act as emolients to the intestines.

Peritoneal inflammation I must again repeat, is replete with danger & beset with difficulties from the commencement. In most cases it is well marked from the commencement, though sometimes irregularities occur which is well calculated to mislead the practitioner, & divert his attention from those remedies by which it should be always encountered. Frequently in the commencement of a violent attack there is great prostration of strength, & the pulse is so low & feeble as to induce a belief that the patient is too much debilitated, to admit of direct depletion. A case of this kind is always one of depression or as it were locked up in the tightness.

If blood be now detracted, it is probable that the patient will sink, & the system not having the power by depression to react the terminals fatally. In a case of this kind we should attempt to rouse the energies of the system, & for this purpose the patient should be placed in a warm bath, diaphoretics should be given at the same time; when the disease begins to develop itself we should make use of small repeated bleedings in order to hasten it, & when fully developed, make use with perfect safety & advantage a more liberal use of the lancet.

There are also cases of an opposite ~~nature~~ character, which are not less dangerous from the false security which it creates. It commences with a slight tenderness of the abdomen, little or no fever, pulse nearly natural being rather quick & a little corded. The practitioner is totally unconscious of the danger which attends

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his patient, when suddenly by some unknown cause the system becomes depressed, the pulse sinks, the surface covered with a cold clammy sweat, & a discharge of black matter now takes place from the Stomach. This is the most insidious & alarming form of the disease, & I attribute it to inflammation attacking that part of the Peritoneum contiguous to the Stomach or to the upper part of the alimentary canal.
After having unavailingly tried all the other remedies in this case we should as a dernier resort, recur to the use of the Spirits of Turpentine. Some practitioners recur to it early in the disease, but it is now pretty well agreed that it only should be used when the inflammation is about to terminate in gangrene, which is manifested by the symptoms I have already mentioned. Turpentine is most commonly recommended in very small doses, from an idea that it is too heating & stimulating to the Stomach, this says Dr Chapman is

is altogether a mistake & when we do recur to it, it is apparently under the most desperate form of the disease. The plan which is to be pursued by him is to administer a tea spoon full of the oil every two or three hours, & increasing it if necessary until its beneficial effects are produced.

Thus Gentlemen I have to the best of my abilities fulfilled the requisitions of your institution. I should be wanting in gratitude, were I not however to express to you, individually, my most sincere thanks, for the many numerous & extensive sources of information ~~which have been~~ received at your hands.

October the 28th 1822.

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Peritonitis 1824

B. F. Perkins

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